Highway 169 Widening and Installation of Metal Beam Guardrail

At Nine Locations on State Route 169 in Humboldt County

01-HUM-169-PM 13.6/33.8

EA 450900

Initial Study with Proposed Negative Declaration

Prepared by the
State of California Department of Transportation

April 2010

Caltrans

General Information About This Document

What's in this document?

The California Department of Transportation has prepared this Initial Study, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Humboldt County, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, the potential impacts from each of the alternatives, the preferred alternative, and the proposed avoidance, minimization and/or mitigation measures.

What should you do?

- Please read this Initial Study with Proposed Negative Declaration. Copies of the document are available at the locations listed below. Individual technical studies can be requested by contacting Environmental Planner Kevin Flannery at 707-441-3927, or by email at kevin_flannery@dot.ca.gov .

1) California Department of Transportation, 1656 Union St., Eureka, CA
2) Humboldt County Library, Eureka Branch, 1313 3rd St., Eureka, CA
3) Yurok Community Center, Weitchpec, CA
4) Yurok Tribal Office, 190 Klamath Blvd., Klamath, CA
5) Jack Norton Elementary School, Pecwan, CA

- If you have any comments regarding the proposed project, please send your written comments to the Department by July 1, 2010.
- Submit comments via postal mail to:

  Kevin Flannery, Associate Environmental Planner
  California Department of Transportation, Environmental Management Branch
  P.O. Box 3700, Eureka, CA 95502-3700

Submit comments via e-mail to kevin_flannery@dot.ca.gov .

What happens next?

After comments are received from the public and reviewing agencies, Caltrans may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Kevin Flannery, or use the California Relay Service TTY number, 711.

Highway 169 Widening and Guardrail

01-HUM-169-PM 13.6/33.8
EA 01-45090

INITIAL STUDY WITH PROPOSED NEGATIVE DECLARATION

Submitted Pursuant to: (State) Division 13, California Resources Code

Prepared by
THE STATE OF CALIFORNIA
Department of Transportation

Date of Approval

Cindy Anderson, Chief
North Region Environmental Services—North
California Department of Transportation

Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation is proposing to improve safety on Highway 169 in Humboldt County through the installation of metal beam guard railing and roadway widening at nine locations. Measures will be taken to avoid or minimize project impacts to the natural scenic environment, the human community, erosion during and after construction, noise impacts during construction, and impacts to plant and animal species.

Determination

Caltrans has prepared an Initial Study for this project and has determined from this study that the proposed safety project would not have a significant effect on the environment for the following reasons:

- The project would utilize aesthetic finishes for all walls and cut slopes to conform to the scenic surroundings and minimize any visual impacts resulting from the project.
- The project would avoid impacts to sensitive receptors, including wildlife and humans, from noise by scheduling any blasting within the work windows described in this document.
- The project would have a less than significant impact on the community if the scheduling of extended road closures (over four hours) is developed in consultation with the Yurok Tribe prior to the commencement of construction activities. During these consultations, the minimization of community impacts shall be given equal priority to the contractor's convenience during construction.

_____ _____

Cindy Anderson
North Region Environmental Services—North
California Department of Transportation

Date

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Initial Study

in accordance with the California Environmental Quality Act or CEQA, Section 21080(c)(2)

Part 1: Project Information

This section of the Initial Study provides details on the proposed project, including "who, why, what, and where" for the proposed work.

Project Title

Highway 169 Widening and Installation of Metal Beam Guardrail

Lead Agency Name, Address and Contact Person

California Department of Transportation
1656 Union St., Eureka, CA 95501
Kevin Flannery, Environmental Planner
(707) 441-3927

Project Location

The proposed project would be constructed at nine locations on State Route 169 between Post Miles (PM) 13.6 and 33.8, between the communities of Pecwan and Weitchpec in Humboldt County (see Figures 1 and 2, Project Vicinity and Location Maps, pages 27 and 28).

Purpose and Need

The purpose of this project is to improve safety through the installation of metal beam guard railing and roadway widening. This project is needed to decrease the potential of collisions and reduce the severity of run-off road collisions at the locations of concern identified by Yurok tribal representatives.

Project Description (Build Alternative)

With the goal of improving safety for the traveling public, Caltrans proposes widening the existing roadway to a width of 20' and installing MBGR in eight locations and replacing the metal beam guardrail at one location on Highway 169 between the communities of Johnsons and Weitchpec. The project was initiated in response to the Yurok Tribal Community's concerns regarding run-off road type

collisions at the nine locations identified for this project. Based upon the discussions between Caltrans and the Yurok Tribe, it is evident that the existing accident data for the project locations does not fully reflect the actual collision history at these locations. Many of the collisions along this portion of Route 169 are not reported. The most likely cause for the majority of these collisions is the narrow roadway and curvilinear alignment of these particular sections. The existing roadway within the project limits was not constructed to Caltrans highway design standards, and it consists of segments where widths are reduced to a single lane and shoulder areas are minimal, or even non-existent.

While the total length of the project is about 20 miles, each proposed work location is relatively short (the longest is approximately 0.14 mile, or 740 feet, in length). The existing alignment of the roadway imposes driving restrictions such as narrow lanes, very minimal shoulders, limited sight distance and difficulties in negotiating countless curves. **Figures 1 through 4 show the overall proposed project, as well as individual locations and vicinity maps.**

This stretch of Highway 169 serves as the vital land link for the residents of this section of the Klamath River. It is the only paved public road into this area, and it ends in the vicinity of Wautec at Post Mile 13.2. In addition, the route is utilized to a lesser extent by commercial and governmental entities including timber companies, the Yurok Tribe, State agencies (such as Caltrans, Department of Fish and Game, and Calfire), and County representatives (for example, schools, public works, and health department employees). Finally, there is some recreational use of the highway to access the lower section of the Klamath River for activities including fishing, hunting, and paddling/boating.

This proposed project was developed in conjunction with the Yurok Tribe, and the proposed design and scope were refined at a public meeting held by the Yurok Tribe in May of 2005 at the Weitchpec Community Center near the site of the proposed project. Tribal staff participated in a field review of the project locations on March 18, 2009 with Caltrans staff. On February 26, 2010, representatives from Caltrans made a presentation to the Tribal Council regarding aesthetic finishes.

This project is included in the FY 2009/2010 portion of the 2006 State Highway Operation and Protection Program (SHOPP) as a Safety Project under the 201.015 CURE Program. The project cost is currently estimated at between $5 million and $13 million to construct.

The proposed work at each location is detailed as follows:

Location 1 (PM 13.66 to 13.73): The roadway will be widened to a minimum 20' width by the construction of a soldier pile wall on the east side of the roadway. The proposed Tieback (Soldier Pile) wall would be approximately 15' to 20' high and 115' long. For aesthetics, piles will be painted with timber colored paint, and treated timber lagging will be placed in between the piles. Metal beam guardrail will also be placed along the top of the wall. The existing roadway width at this location varies from 16' to 20' in width. Construction of the soldier pile wall will increase the roadway width enough to allow vehicles in each direction to negotiate the curve with improved visibility.

Location 2 (PM 18.94 to 19.08): The roadway will be widened to a minimum 20' width by cutting existing slopes at a slope ratio of 1H:1V with a maximum cut height of 21'. The increased roadway width and minor improvements to alignment will improve sight distance and allow for one vehicle in each direction to negotiate this segment of roadway. Cantilevered metal beam guard railing will also be installed along the west side of the roadway to minimize runoff road-type collisions.

Location 3 (PM 20.48 to 20.62): The work at this site includes widening the existing roadway to 20' by cutting the existing slopes at a slope ratio varying from 0.5H:1V to a maximum height of 55' and installing standard metal beam guard railing. Approximately 10% of the total excavation will require controlled blasting. Since the rock slopes are highly fractured in this area, the excavated slopes will be covered with cable drapes or anchored wire mesh systems to mitigate potential rock fall. For aesthetic treatment, cable drapes or the wire mesh will be painted black. Lastly, the culvert inlet at PM 20.60 will be extended northward.

Location 4 (PM 22.46 to 22.54): Work at this location will include widening and realigning the existing roadway and placing cantilevered metal beam guardrail. The existing turnout at the location midpoint will be maintained.

Location 5 (PM 22.60 to 22.71): The proposed work at this location includes widening the existing travel way to 20' via a rock-bolt wall and wire mesh. The wall will be a maximum height of 65' and length of 345'. The rock-bolt wall will include aesthetic treatment such as black-painted wire mesh. The roadway widening will result in minor improvements to the highway alignment. Cantilevered metal beam guard railing will also be installed along the right side of the roadway to minimize

runoff road-type collisions. Lastly, the culvert inlet at PM 22.67 will be extended northward.

Location 6 (PM 22.73 to 22.82): The work at this location includes widening the existing traveled way to 20' by cutting the existing rock face at a slope ratio of 1H:1V to a maximum height of 60' and constructing cantilevered metal beam guard railing. Due to highly fractured rock at this location, cable drape will be used to mitigate potential rock fall from excavated slopes. The culvert at PM 22.77 will also be replaced. The culvert is damaged and flow is now subsurface beneath the culvert.

Location 7 (PM 22.88 to 22.99): The proposed work here includes widening the existing roadway via excavation of slopes at a slope ratio of 1H:1V and constructing cantilevered metal beam guard rail.

Location 8 (PM 23.25 to 23.39): The work at this location includes widening the existing roadway to 20' via construction of a soil nail wall approximately 510' long with a maximum height of 20' and construction of both cantilevered and standard metal beam guardrail. A 3' to 4' wide bench will be constructed and a rock fall fence will be placed at the top of the wall. For aesthetic treatment, type 60D modified barriers with Yurok basket weave pattern will be placed at roadway level, adjacent to the base of the wall. In addition, Cast In Place (CIP) surface of the wall will receive a yet-to-be-determined treatment, such as timber lagging, rock or tribal pattern.

Location 9 (PM 33.78 to PM 33.80): The work here will only require upgrading a metal beam guardrail end treatment.

General Construction Issues

As noted above, there will be at least one major inconvenience to the traveling public during construction: road closures. The narrow width of the existing roadway and the steep surrounding terrain will not allow for detours during construction, so scheduled road closures of up to nine hours at some locations will be necessary. This is the minimum amount of time necessary for the construction equipment to be mobilized and demobilized to allow traffic through the work site.

Potential equipment storage locations or staging areas for use during construction are the wide shoulders at PM 13.6, 18.8, 19.1, 20.3, 20.8, 22.7, 23.5, 30.0-30.2 and 33.7. No permanent land alteration or disposal is proposed at these locations, and the contractor will be required to leave these areas in clean condition at the end of construction.

Alternatives Considered and the "No Build Alternative"

Other alternatives were considered during the project development process but were eliminated based upon issues of feasibility and/or constructability. The alternatives considered but eliminated from further consideration are listed below:

Standard 12' Lane Width. The idea of improving safety through widening the existing roadway to a standard 24' width (i.e. 12' lanes in each direction) was eliminated as an alternative due to the excessive right of way required and the impacts that would occur to vegetation, including very large and old trees. This alternative would have required extensive cuts and fills that would permanently alter the aesthetic nature of the existing route. In addition the estimated costs would result in a project that would be difficult to fund in the near future.

Standardize Roadway Geometrics. A goal of almost all highway projects is to improve safety through the use of standard conventional highway geometrics in design. This concept was also eliminated from further consideration. The existing highway is not an engineered alignment and generally does not comply with geometric standards such as horizontal curve radius, vertical alignment, stopping sight distance and roadway cross section. Any attempt to meet these standards would require extensive reconstruction of the route and result in excessive construction and right of way costs and impacts to environmental resources. The estimated costs for this concept would also pose extreme funding difficulties.

No-Build Alternative. Although it does not address the project's need, the "No Build Alternative" must be analyzed under State and Federal law as an alternative to the project. The effects of not building the proposed project would include the following, some beneficial to the environment and others with negative environmental impacts:

*The biological, aesthetic, community, and archaeological construction impacts that are detailed within this document **would not occur** if the project is not completed;

*The existing roadway alignment and its related traffic safety deficiencies would remain unchanged, and would continue to impact the traveling public. The local community would continue to bear the brunt of these impacts, including slower emergency response times, difficulties for the school bus on its daily runs, and continued driving risks due to the limitations of the Highway 169 alignment;

*Among public agencies, the Yurok Tribe would be most affected by the "No Build" alternative. Individual tribal members would be impacted as the primary users of the

facility and the Tribe's future improvement plans could be limited by the existing highway alignment. It is clear from short conversations with local tribal members at the project sites, and from more official conversations with Tribal staff, that the community appreciates this project and other proposed improvements on this route;

*It is likely that the difficult road access has held local property values down, and this economic impact would continue;

*It is also likely that much of the proposed work at nine locations would eventually occur in a more piecemeal and unplanned manner over a period of years, since the need for improvements to sight distance and roadway width are very real and necessary.

Permits and Approvals Needed

- Biological Opinion: U.S. Fish and Wildlife
- 401 Certification: United States EPA (through the Yurok Tribe)
- 404 Permit: Army Corps of Engineers (Nationwide Permit #5)
- 1602 Streambed Alteration Agreement: California Department of Fish and Game
- Air Quality Certifications : United States EPA (through the Yurok Tribe)

Part 2: Affected Environment, Environmental Consequences, and Mitigation Measures

This section explains the effects that the proposed project would have on the human, physical and biological environment in the project area. It describes the existing environment that could be affected by the proposed project, and the measures that are proposed to avoid and minimize negative impacts from the project.

No Adverse Impacts

As part of the design scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document:

Coastal Zone—the project is located approximately 10 miles east of the coastal zone boundary;

Parks and Recreation—there are no park facilities within the project limits. The project may temporarily delay access to some undeveloped recreational sites along the Klamath River during construction, but the delays would be relatively short in duration in an area with minimal recreational use;

Farmland/Timberlands—no adverse impact is anticipated to these lands;

Hydrology and Floodplains—existing hydrologic conditions will be maintained (see description of proposed culvert replacement work), and all work will be above Ordinary High Water (OHW);

Paleontology—no impacts are anticipated to paleo resources. If excavation reveals fossils or other evidence of paleo resources, construction will be halted to allow study of the discovery and consultation with the appropriate public agencies;

Environmental Justice—based on an analysis of the proposed alternatives, the project does not cause disproportionately high or adverse effects on any minority or low-income populations. Each alternative affects the same properties and populations equally and the project will benefit local residents equally.

Table 1: Environmental Resources Potentially Affected

The environmental resources checked below would be potentially affected by this project.

X	Aesthetics
	Agricultural Resources
X	Air Quality
X	Biological Resources
X	Cultural Resources
X	Geology/Soils
	Hazards and Hazardous Materials
X	Hydrology/Water Quality
	Land Use/Planning
	Mineral Resources
X	Noise
	Population/Housing
	Public Services
	Recreation
X	Wild and Scenic River
X	Transportation/Traffic
	Utilities/Service Systems
	Mandatory Findings of Significance

Surrounding Land Use

The proposed project would be constructed in a remote rural section of Humboldt County that consists primarily of larger parcels over 25 acres in size. Most parcels have "Unclassified" zoning, with scattered Timber Production Zoning (TPZ) properties. The primary land use within the project limits is rural residential. Much of the land within the project limits is "Tribal Land" overseen by the Yurok Tribe. These lands consist of land allotments for individual tribal members, and Tribal Trust land held by the U.S. Bureau of Indian Affairs for the Tribe's benefit.

The project, as noted above, would be constructed in a remote area, one of the most remote in California. Utilities are just now being extended along Highway 169 toward Johnsons. The highway in this area sees relatively little traffic and very few commuters due to this remoteness and lack of local industries. Most jobs in the area are related to highway or road construction, private timber operations, and various public or social agencies. While the remote rural location may indicate an agricultural presence, in fact there is limited traditional agriculture due to topography. Many of the local residents appear to rely partially upon the local resources for subsistence.

Biological Resources

Regulatory Background

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act: United States Code, Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems on which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of formal consultation under Section 7 is a Biological Opinion or an incidental take permit. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats.

Biological Resources--Affected Environment

The project setting is a forested river corridor along a designated Wild and Scenic River. Elevations of the nine work sites range between 280-440 feet. The slopes are densely vegetated due to the considerable precipitation, moderate year-round temperatures, and high relative humidity. Vegetation communities include coniferous forests and oak woodlands. Topography in this mountainous region is steep and rugged and soils are rocky and well drained.

Location 1, from PM 13.69-13.71: the project area includes a steep uphill slope with a southern aspect. The dominant tree species are Douglas fir, Pacific madrone, big maple, and western red cedar. The diameter at breast height (dbh) of these trees ranges between 6 and 30 inches. Dominant shrub species include poison oak, toyon, and tan oak. A drainage ditch runs along the toe of the uphill slope, and carries roadside runoff east to a culvert beyond the project boundaries. This culvert empties onto a steep slope that is covered with large boulders and the following shrub species: California bay, pampas grass, Queen Anne's lace, bracken fern, arroyo willow, and Himalayan blackberry.

Location 2, from PM 18.96-19.02: the project area is situated on a steep uphill slope with a southwestern aspect. During initial surveys, Douglas fir, Pacific madrone, and California bay dominated the vegetation on the uphill slope. Scotch broom was the dominant shrub species. However, between March and July 2009, the trees on the uphill slope were cut down for a public utility project. A drainage ditch runs along the toe of the slope, and drains to the east into a large flat area where it perks into the ground. Below the highway, the slope gradually descends to the river. The slope is sparsely vegetated with coyote brush and scotch broom.

Location 3, from PM 20.47-20.51: the project area includes a steep uphill slope with a southwestern aspect. The slope is sparsely vegetated with tree species including canyon live oak, Douglas fir, and Pacific madrone. The dominant shrubs are *Ceanothus* sp., coyote brush, and toyon. A roadside ditch at the toe of the slope flows east into a culvert that extends beyond the downhill slope.

Location 4, from PM 22.48-22.51: the dominant tree species at this location are Douglas fir and Pacific madrone. Scotch broom is the dominant shrub species.

Location 5, from PM 22.63-22.64: the project area is situated on a steep uphill slope with a southwestern aspect. Douglas fir, Pacific madrone, canyon live oak, and Oregon white oak dominate the vegetation on the uphill slope. Ocean spray and scotch broom are the dominant shrub species.

Location 6, from PM 22.74-22.76: the project area is situated on a steep hillside with a southwestern aspect. Dominant tree species on the slope include Pacific madrone, California black oak, and California bay. Scotch broom and Himalayan blackberry are the dominant shrub species. A stream, approximately three feet wide and running perpendicular to the highway, is located at the eastern boundary of this project location. The stream is not a fish-bearing stream.

Location 7, from PM 22.89-22.95: the project area is situated on a steep hillside with a southwestern aspect. Dominant tree species include Canyon live oak, Pacific madrone, and California bay. Scotch broom, ocean spray, and Ceanothus sp. are the dominant shrub species at this location.

Location 8, from PM 23.28-23.32: the project area is situated on a slope with a southwestern aspect. Recent field surveys have found the area to be devoid of most vegetation as a result of a public utility project.

Location 9, from PM 33.76-33.77: the project area is located at the southwest corner of Route 96 and 169 in a flat area that is frequently used by local people waiting for transportation. The project site is devoid of vegetation due to rocky soil and foot traffic.

Potential Biological Impacts

The proposed work at Location #1 would include excavation on a slope above the Klamath River, construction of an access road and wall, and placement of RSP below the wall. All of these activities have the potential for impacts to fish. The work at this location is within designated critical habitat for coho salmon, Chinook salmon, and steelhead trout.

The proposed work at Location #2 would include excavation on a rocky slope above the highway, and installation of cantilevered guardrail. No sensitive biological resources should be impacted.

The proposed work at Location #3 would include excavation on a slope above the highway, placement of cable draping on the slope, extension of a culvert inlet and installation of standard guardrail. Six Douglas firs, two madrones, and ten Canyon live oaks would be removed during construction. Blasting will be utilized during excavation.

The proposed work at Location #4 would include excavation of a slope above the highway, and installation of cantilevered guardrail. No sensitive biological resources should be impacted.

The proposed work at Location #5 would include excavation on a rocky slope above the highway, construction of a 345-foot long rock bolt wall above the highway, extension of a culvert inlet, and installation of cantilevered guardrail. Four Douglas fir trees, a madrone, and a California black oak would be removed.

The proposed work at Location #6 would include excavation of the rocky slope above the highway, placement of a cable draping system on the slope, replacement of a culvert, and installation of cantilevered guardrail. A Douglas fir, four madrones, three Canyon live oaks, and a California black oak would be removed during construction.

The proposed work at Location #7 would consist of the excavation of a slope above the highway, and installation of cantilevered guardrail. No sensitive biological resources should be impacted.

The proposed work at Location #8 would consist of the excavation of a slope above the highway, construction of a 510-foot long wall, and installation of cantilevered and standard guardrail. No sensitive biological resources should be impacted.

The proposed work at Location #9 would consist of repairs to existing guardrail. No sensitive biological resources should be impacted.

Biological Resources--Avoidance and Minimization Measures

The work at Location #1 will include a containment barrier to keep excavated material from falling into the river during construction. Piles for the proposed wall will be cast-in-place (not driven) to avoid noise and vibration impacts to birds or salmonids. All RSP will be placed above ordinary high water to avoid impacts to essential habitat for salmonids.

At Location #3, the work will include a containment barrier to keep excavated material from falling into the river during construction. A September 16 to February 28 work window for blasting will be enforced by the Resident Engineer to avoid noise-related impacts to birds.

Location #5 will require a containment barrier to keep excavated material from falling into the river during construction. Tree removal prior to construction will be limited to a September 1 through March 1 work window to avoid nesting birds.

Location #6 will require a containment barrier to keep excavated material from falling into the river during construction. Tree removal prior to construction will be limited to a September 1 through March 1 work window to avoid nesting birds. Culvert work will be limited to a June 15 through October 15 work window, with flow diversion requirements to avoid siltation.

Location #7 will require a containment barrier to keep excavated material from falling into the river during construction.

Location #8 will require a containment barrier to keep excavated material from falling into the river during construction. Tree removal prior to construction will be limited to a September 1 through March 1 work window to avoid nesting birds.

Biological Resources--Conclusions

If the avoidance and minimization measures detailed above are completed at the appropriate times during construction, the proposed project should not result in substantial impacts to sensitive biological resources.

Cultural Resources

Regulatory Background

"Cultural resources" as used in this document refers to all historical and archaeological resources, regardless of significance. A variety of laws and regulations deal with cultural resources on projects.

The National Historic Preservation Act of 1966 (NHPA), sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on

Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties.

At a State level, historical resources are considered under the California Environmental Quality Act (CEQA), as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria.

Cultural Resources--Analysis and Avoidance/Minimization Measures

Caltrans, under the authority of the Federal Highway Administration, has determined that a Finding of No Adverse Affect is appropriate for this proposed project under 36 CFR 800.4(d)(1). Caltrans Archaeologist Darrell Cardiff (Project Archaeologist) conducted multiple archaeological surveys of the project area since January 2006. The survey effort did not identify any Historic Properties within the project's Area of Direct Impact (ADI) or Area of Potential Effects (APE). There are, however, cultural resources adjacent to the areas covered by this investigation.

Table 2: Summary of Section 106 Consultation To Date:

X Local Government

- Yurok Tribal Heritage Preservation Office. Dr Thomas Gates, Tribal Heritage Preservation Officer. 15900 Hwy 101 North, Klamath California 95548
- Dr. Gates was consulted during the initial planning process (January 2006, March 2007, July 2007) for this project.
- Yurok Tribal Heritage Preservation Office. Robert McConnell, Tribal Heritage Preservation Officer. 15900 Hwy 101 North, Klamath California 95548
- Mr. McConnell was consulted during March 2009 and June 2009.
- Consultation of the Yurok Tribal Heritage Preservation Officer is continuous and on-going throughout the project.

X Native American Tribes, Groups and Individuals

- Yurok Culture Committee meeting February 26, 2010.
- Yurok Culture Committee meeting September 21, 2009.
- Yurok Culture Committee meeting February 27, 2009.
- Yurok Culture Committee meeting August 22, 2008. No cultural concerns were expressed by any committee members regarding the project.
- Yurok Culture Committee meeting February 22, 2008. Proposed geotechnical drilling activities at Locations #1 and #8 were discussed. No cultural concerns were expressed by any committee members regarding these specific locations.
- Robert McConnell (Yurok Tribe Environmental Program – Cultural Resources Division) examined Locations 1-9 in July 2007.

The Project Archaeologist will establish an Environmentally Sensitive Area (ESA) at Locations #5, #6, and #7 to prevent construction impacts to known resources downslope.

The Project Archaeologist and Project Specifications Engineer will include a contract specification requiring consultation between the construction contractor and the Yurok Tribe regarding tribal ceremonial events. If tribal ceremonial events are scheduled to occur during the proposed construction, construction activities will be suspended for the duration of the ceremonial event.

A contract specification requiring Cultural Monitoring by the Yurok Tribe and the Project Archaeologist of all ground disturbing construction activities at Location #9 will also be included by the Project Specifications Engineer for the purpose of addressing any post review discoveries (36 CFR 800.11) in the unlikely event that they occur.

It is Caltrans' policy to avoid Historic Properties whenever possible. If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find.

Additional archaeological survey will be needed if project limits are extended beyond the present survey limits.

The actual construction of the proposed project would take place on rocky slopes and on the existing highway. Therefore it is very unlikely that human remains could be encountered during excavation. In the event that human remains are discovered, further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the Yurok Tribe and County Coroner are to be immediately notified.

Community Impacts

Regulatory Background

The Federal Highway Administration in its implementation of NEPA (23 USC 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

Community Impacts--Analysis

Community Boundaries: For purposes of this analysis, the community boundaries are considered to be Weitchpec and Johnsons (see Figure 1). The community, therefore, coincides with this entire section of Highway 169, which was a traditional footpath long before the establishment of the State Highway system.

Commercial Uses: There are no known businesses located within the project limits, but this is strictly based upon visual surveys from the highway. It is likely that there are a number of commercial enterprises, providing products or services for the benefit of the community without advertising or signs. This dependence on word-of-mouth communications and localized commerce, which has traditionally been due to lack of public utilities, is one of the characteristics that indicate a high level of cohesion within this community.

Local Demographics: No analysis has been conducted of demographics or the local economic base, because negative impacts of this nature from this particular project would be very unlikely. The local population is understood to be largely homogenous in terms of economics and social characteristics. Weitchpec is recognized as the community center for this section of the Lower Klamath River, but in addition there are a large number of smaller communities that make up this larger community. These consist primarily of traditional Yurok village locations, which often have ceremonial significance. Examples of these smaller communities include Ke-nek, Mue reep, Kep'-el, Noch-Kow, Srey-gon, and Pek-won (alternatively spelled Kanick, Mureep, Cappell, Nochko, Sregon, and Pecwan, see Figure 1).

Community Involvement in Project: Caltrans representatives have had a series of meetings with local community leaders from the Yurok Tribe over six years of developing the proposed project. The project was initiated in consultations between the Yurok Tribe and Caltrans specifically to meet the safe traveling needs of the local community. Caltrans representatives also made a presentation of this proposal at a public meeting held by the Tribe in May of 2005 at the Weitchpec Community Center. In addition, staff members from the Tribe and Caltrans participated in a field review of all locations on March 18, 2009. Discussions have continued in recent weeks as the project design is being developed.

Community Cohesion: There are a number of indicators that point to a high level of community cohesion. As noted earlier, it appears that local commerce depends upon word of mouth, which contributes to the feeling that residents are dependent upon each other. There are well-known historic connections between the Yurok Tribe and particular locations and landforms within the Klamath River region, which has contributed to a very high percentage of long-term residents. Most residences in the community have two or more people, an indication of greater community cohesion, as opposed to single person homesteads. Community events are centered around the Yurok Tribal community center, which overlooks the junction of the Trinity and

Klamath Rivers at Weitchpec. Regular updates of local governmental issues by Tribal Council members are held within homes in the smaller communities down river from Weitchpec. The Yurok Tribe traditionally assigns a very high priority to the well-being of their elders, and to the advice that they can offer. This is another characteristic that greatly increases community cohesion. Overall, this community is considered to have a high level of cohesion.

Potential Community Impacts-Access: The proposed project would improve safety to the local traveling public, but it is not expected to increase traffic from the outside.

Potential Community Impacts-Neighborhoods: The proposed project makes a series of improvements to the existing highway alignment, and has no possibility of dividing neighborhoods.

Potential Community Impacts-Separating Residents from Community Facilities: The proposed project has the potential to separate residents from community facilities for short periods during construction, but this is considered a temporary and fairly minor impact. The proposed project, upon completion, will actually improve traveling safety and access for community residents.

Potential Community Impacts-Growth: The project is on the existing alignment and does not have potential for inducing any detectable growth in the community.

Potential Community Impacts-Quality of Life: While this project will have a number of temporary impacts to the quality of life for residents during construction, it is expected to improve the quality of life for the community residents by improving the most deficient sections of highway within the community. Local residents are overwhelmingly the highest users of this stretch of Highway 169 and the project should benefit them very directly.

Potential Community Impacts-Urbanization or Isolation: Aside from temporary impacts during construction, there will be no increase in either urbanization or community isolation as a result of the proposed project. It is anticipated that the community will experience decreased isolation with the improvements to the highway, without any detectable change to the overall rural nature of the community.

Potential Community Impacts-Relocations: There will be no relocations of people or personal goods as a result of this proposed project.

Community Impacts--Conclusion

The local community shows a very high level of community cohesion, probably due largely to its isolated location. While the proposed project will impact the community during construction, these impacts will be minimized in consultation with the Tribe prior to construction. Specifically, highway closures during construction, and the impact of any extended closures upon the local residents will be addressed during these consultations. If these consultations place the needs of the community on an equal level as the construction contractor's wishes, and if a strategy is developed that takes into account both the contractor and the community, then it is not anticipated that any adverse impact to the community would occur as a result of the proposed project.

Visual Impacts

Regulatory Background

The California Environmental Quality Act (CEQA) establishes that it is the policy of all state agencies in California to take all action necessary to provide the people of the state "with …enjoyment of *aesthetic*, natural, scenic and historic environmental qualities." (CA Public Resources Code Section 21001[b]).

In addition, Caltrans strictly follows a policy of "context sensitive design". This policy states "the Department uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders. The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed."

Visual Impacts--Analysis and Avoidance/Minimization Measures

A licensed Landscape Architect (see list of preparers on page 48) has studied the proposed project for potential visual impacts. This analysis follows procedures that are detailed in the Federal Highway Administration's 1981 publication "Visual Impact Assessment for Highway Projects." This requires the following six steps:

1) identify the project setting and viewshed; ,2) identify key views within the project; 3) analyze existing visual resources in the vicinity; 4) depict the physical appearance of all alternatives; 5) assess the visual impacts of each alternative; and 6), propose mitigation for visual impacts. This report is available for review at the Caltrans District One office in Eureka.

The analysis identifies the project setting and existing viewshed as a twenty-mile stretch of steep and forested terrain adjacent to the Klamath River. The small communities within the project limits are developed to a level that enhances this rural setting. This entire stretch of road is identified as a "visually pleasing natural area" that can leave the impression that the traveler is in a wilderness area. A number of specific sites are noted for their high visual quality. These include the area just upstream of Johnsons, including Pecwan Creek, the area surrounding Cappell Creek, and the Martins Ferry Bridge vicinity.

An analysis of the proposed work at each location determined that the project should result in low visual impacts at Locations 1 through 7, a moderate visual impact at Location 8, and no impact at Location 9. The proposed work includes measures to be implemented during construction that minimize the visual impacts, and these consist of the use of native grasses for erosion control on new slopes, coloring walls in shades that are neither too light nor too dark, consultation with the Yurok Tribe to determine final wall finishes, powder coating all wire mesh with dark brown, gray, or black finish, and use of dark weed control mat where necessary.

Below are examples of similar aesthetic wall finishes and colored slope draping that will be utilized on this proposed project.

Exhibit A: Example of Aesthetic Finish (Location #8)

Exhibit B: Another Example of Aesthetic Finish (Location #8)

Exhibit C: Example of Rock Bolt and Wire Mesh (Locations #3, #5, & #6)

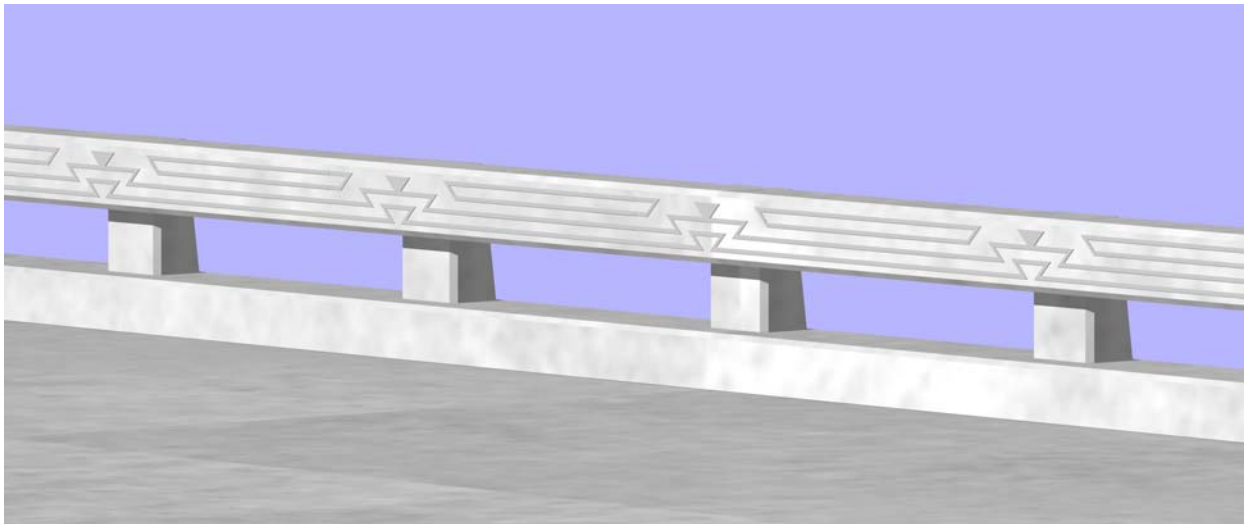


Exhibit D: Computer-Generated Example of Railing Design (Location #8)

Visual Impacts--Conclusion

The proposed project would be constructed in an area with a scenic resource, the Klamath River, but no visual impact to this resource is anticipated. Visual impacts from the project will be minor if the minimization measures detailed above are incorporated during construction.

Hazardous Waste

Regulatory Background

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Hazardous Waste--Analysis

Caltrans' Office of Environmental Engineering completed an Initial Site Assessment (ISA) for the project location on March 20, 2007. The ISA found that the project does not involve properties that have previously been recorded with hazardous waste. In addition, the ISA notes that, based upon field surveys and geologic mapping, no naturally occurring asbestos is expected within the proposed work areas.

Hazardous Waste--Conclusion

The proposed project is not expected to have any impacts related to hazardous waste or naturally occurring asbestos.

Noise

Regulatory Setting

Federal law provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for Federal-aid highway projects. According to 23 CFR 772.3, all highway projects that are developed in accordance with this regulation are deemed to be in conformance with the FHWA noise standards. Under 23 CFR 772.7, projects are categorized as Type I or Type II projects. Under 23 CFR 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. 23 CFR 772 also

requires that construction noise be evaluated for all Type I and Type II projects. To perform an assessment of construction noise, land uses or activities that may be affected by the elevated noise from construction of the project should be identified.

When determining whether a permanent noise impact is significant under CEQA, comparison is made between the baseline noise level and the post-construction noise level. As detailed in CEQA, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected and the absolute noise level.

Noise--Analysis

Permanent Impacts from Noise

The proposed project is not a Type I or Type II project. Type I projects are those that create entirely new facilities with the potential to increase noise. These include new alignments, addition of ramps, or truck passing lanes. Type II projects are noise reduction retrofit projects such as sound walls.

Under CEQA, the proposed project would indeed be built in a very unique setting. However, there are very few human receptors that could potentially be affected (fewer than a dozen homes in the twenty miles), and there will be very little or no permanent increase in noise due to the nature of the project (various adjustments to the existing alignment). The proposed project would not straighten the entire winding alignment, so overall driving patterns will be mostly unchanged by the proposed project.

Given all of these factors, permanent changes in traffic noise are not expected and no abatement measures are proposed.

Temporary Construction Impacts from Noise

Due to the necessity to utilize explosive charges, or blasting, during excavation at Location 3, construction noise from the proposed project does have the potential for impacts to sensitive biological resources, in this case nesting raptors at known and documented nest locations within the project limits. This conclusion is the result of a design review and subsequent discussions between the project biologist and the United States Fish and Wildlife Service.

In cases such as this, the Federal Highway Administration (FHWA) recommends that the project biologist work closely with certified noise analysts to assess the potential noise impacts and develop mitigation strategies. Proposed projects are to be evaluated individually, considering the relationship of both stationary and mobile construction activities to sensitive adjacent receptors and considering the timing of construction activities in relation to activities occurring within the community. The FHWA's noise guidance notes that the most accurate representation of a project's construction noise level at any given location would be obtained by extensive and/or continuous monitoring of noise levels from all construction operations at that location, but such monitoring is not usually practical based on timing, manpower, and equipment constraints.

The following table has been prepared by the FHWA, based upon actual observations during the construction of a tunnel project:

Equipment and operation noise levels in this inventory are expressed in terms of L_{max} noise levels and are accompanied by a usage factor value. They have been recently updated and are based on extensive measurements taken in conjunction with the Central Artery/Tunnel (CA/T) Project. This table summarizes the equipment noise emissions database used by the CA/T Project. While these values represent the "default" values for use in the RCNM, user-defined equipment and corresponding noise levels can be added.

Table 3: FHWA Noise Levels and Usage Factors (selected equipment)

Equipment Description	**Impact Device?**	**Acoustical Usage Factor (%)**	**Spec. 721.560 L_{max} @ 50 feet (dBA, slow)**	**Actual Measured L_{max} @ 50 feet (dBA, slow) (Samples Averaged)**	**Number of Actual Data Samples (Count)**
All Other Equipment > 5 HP	No	50	85	N/A	0
Auger Drill Rig	No	20	85	84	36
Backhoe	**No**	**40**	**80**	**78**	**372**
Blasting	**Yes**	**N/A**	**94**	**N/A**	**0**
Chain Saw	**No**	**20**	**85**	**84**	**46**

Compactor (ground)	**No**	**20**	**80**	**83**	**57**
Compressor (air)	**No**	**40**	**80**	**78**	**18**
Concrete Mixer Truck	**No**	**40**	**85**	**79**	**40**
Concrete Pump Truck	**No**	**20**	**82**	**81**	**30**
Concrete Saw	**No**	**20**	**90**	**90**	**55**
Dozer	No	40	85	82	55
Drill Rig Truck	**No**	**20**	**84**	**79**	**22**
Dump Truck	**No**	**40**	**84**	**76**	**31**
Excavator	**No**	**40**	**85**	**81**	**170**
Front End Loader	**No**	**40**	**80**	**79**	**96**
Generator	**No**	**50**	**82**	**81**	**19**
Generator (<25KVA, VMS Signs)	**No**	**50**	**70**	**73**	**74**
Grader	**No**	**40**	**85**	**N/A**	**0**
Horizontal Boring Hydraulic Jack	**No**	**25**	**80**	**82**	**6**
Hydra Break Ram	Yes	10	90	N/A	0

Jackhammer	**Yes**	**20**	**85**	**89**	**133**
Mounted Impact Hammer (hoe ram)	**Yes**	**20**	**90**	**90**	**212**
Pavement Scarifier	**No**	**20**	**85**	**90**	**2**
Paver	**No**	**50**	**85**	**77**	**9**
Pneumatic Tools	**No**	**50**	**85**	**85**	**90**
Pumps	**No**	**50**	**77**	**81**	**17**
Rock Drill	**No**	**20**	**85**	**81**	**3**
Roller	No	20	85	80	16
Scraper	**No**	**40**	**85**	**84**	**12**
Tractor	No	40	84	N/A	0
Vacuum Street Sweeper	**No**	**10**	**80**	**82**	**19**
Warning Horn	**No**	**5**	**85**	**83**	**12**
Welder/Torch	**No**	**40**	**73**	**74**	**5**

Note: for each generic type of equipment listed in Table 9.1, the following information is provided: an indication as to whether or not the equipment is an impact device; the acoustical usage factor to assume for modeling purposes; the specification "Spec" limit for each piece of equipment expressed as an L_{max} level in dBA "slow" at a reference distance of 50 foot from the loudest side of the equipment; the measured "Actual" emission level at 50 feet for each piece of equipment based on hundreds of emission measurements performed on CA/T work sites; and the number of samples that were averaged together to compute the "Actual" emission level. A comparison of the "Spec" emission limits against the "Actual" emission levels reveals that the Spec limits were set, in general, to realistically obtainable noise levels based on the equipment used by contractors on the CA/T Tunnel Project.

The noise data displayed in Table 4 below provides additional information on typical construction noise impacts. Source: FHWA Noise Guidance.

Table 4: Federal Transit Authority (FTA) Equipment Noise Levels.

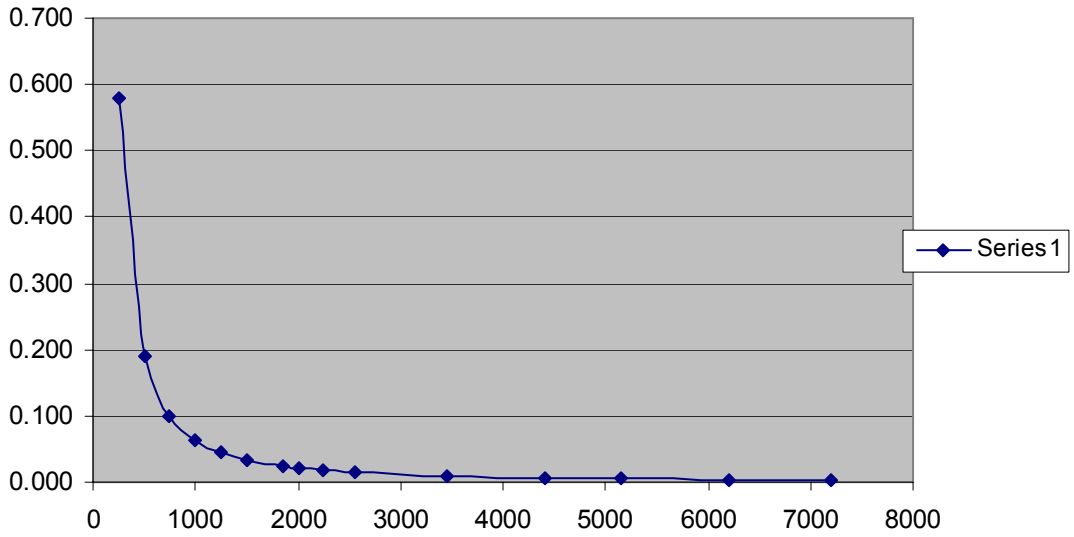
Equipment	Typical Noise Level (dBA) 50 ft from Source*
Air Compressor	**81**
Backhoe	**80**
Compactor	**82**
Concrete Mixer	85
Concrete Pump	**82**
Concrete Vibrator	**76**
Dozer	85
Generator	**81**
Grader	**85**
Impact Wrench	85
Jack Hammer	**88**
Loader	**85**
Paver	**89**
Pneumatic Tool	85
Pump	**76**
Rock Drill	**98**

Roller	74
Saw	**76**
Scarifier	83
Scraper	**89**
Shovel	82
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	**88**

*Table based on EPA Report, measured data from railroad construction equipment taken during Northeast Corridor improvement project and other measured data.

In addition to this generic data, Caltrans noise specialists in Sacramento have prepared Table 5 in an effort to determine the probable noise levels on site at Location #3 during blasting.

Table 5: Probable Noise and Vibration Levels and Distance



Vibration

K= 100 Charge Wt= 100
Ave Normal Confinement K = 100
Highest Normal Confinement K = 240
Sinking Cut K = 330 to 420

Distance	Calc'd PPV
100	2.512
250	0.580
500	0.191
750	0.100
1000	0.063
1250	0.044
1500	0.033
1850	0.024
2000	0.021
2250	0.017
2550	0.014
3450	0.009
4400	0.006
5150	0.005
6200	0.003
7200	0.003

Air Blast

K= 0.75
K=0.75 for probable
K=2.4 for maximum

Distance	Calc'd PSI	Calc'd dB
100	0.01884	136.3
250	0.00627	126.7
500	0.00273	119.5
750	0.00168	115.3
1000	0.00119	112.3
1250	0.00091	109.9
1500	0.00073	108.0
1850	0.00057	105.8
2000	0.00052	105.0
2250	0.00045	103.8
2550	0.00039	102.5
3450	0.00027	99.3
4400	0.00020	96.8
5150	0.00017	95.2
6200	0.00013	93.2
7200	0.00011	91.7

Data provided by Caltrans Noise and Vibration Program, Caltrans Headquarters, Sacramento. The first graph depicts noise levels declining with distance from blasting. The tables depict vibration and air blast declining as a function of distance from blasting.

Based upon the information detailed above, the proposed project has the potential for temporary noise impacts to sensitive biological resources. And, as noted, the studies necessary to truly determine the construction noise impacts at any given location would require extensive monitoring of noise levels from all construction operations at that location. This type of monitoring is not practical for this project, due mainly to the timing and manpower that would be necessary.

The proposed project therefore has a conflict between the necessity to protect sensitive biological resources from noise and vibration impacts, and the difficulties associated with determining actual noise and vibration levels on site. In order to resolve this, an avoidance strategy will be implemented during construction. It is proposed to avoid blasting noise and vibration impacts to birds by limiting blasting on this project to the period between September 16 and February 28. This approach will accommodate the raptors' nesting period by delaying blasting until nesting is complete, and allow adequate time for construction scheduling. There should be no

negative impact to the timely completion of the project as a result of this construction scheduling limitation.

Potential Noise Impacts to Community

Among the various analyses that the FHWA recommends for this type of project is a study to determine noise impacts upon the community. They note that adverse effects of construction noise upon a community have historically been considered to be an inevitable, short-term, and necessary impact. The recommended approach is to include noise control commitments in a project's environmental documents.

Typically, construction noise control commitments only include a variety of common sense actions (for example, ensuring that all vehicles have proper mufflers, trying to schedule work to be least disturbing, possibly erecting project noise barriers early in the construction process, and demonstrating compliance with any and all local noise ordinances). Noise control commitments for this project consist of the following measures: blasting during construction shall be limited to a work window between September 16 and February 28.

In consideration of the above, this proposed project is not expected to have any community-wide construction noise impacts.

Noise--Conclusion

No permanent noise impacts are anticipated as a result of the proposed project. Therefore, no permanent abatement is being proposed.

Temporary noise impacts resulting from the construction of the proposed project have the potential to affect sensitive bird species. Specifically, the proposed blasting at Location 3 poses a problem. Therefore, an avoidance strategy will be employed: blasting shall be conducted only in the period between September 16 and February 28, after the bird nesting period is over.

The proposed project does not have the potential for community-wide noise impacts.

Air Quality

Regulatory Setting

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air.

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity for this type of project in California is achieved during approval of the Regional Transportation Plans (RTP) that include all of the transportation projects planned for a region over a period of years, usually at least 20.

Conformity at the project-level only requires a “hot spot” analysis if an area is listed as either a “non-attainment” or “maintenance” location for carbon monoxide (CO) and/or particulate matter.

Air Quality--Analysis

The proposed project is not expected to have any long-term effect on air quality. Any reduction in air quality resulting from the project would occur during the actual construction.

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in adverse or long-term conditions. In consideration of this, Caltrans has developed a number of standard contract specifications that the contractor will be required to implement during construction. The resident engineer in charge of construction will guarantee the enforcement of these requirements.

Among these is Section 7 of the Standard Specifications, entitled "Legal Relations and Responsibility." This section is very general, and addresses the contractor's responsibility on many areas of concern. These include air pollution, protection of lakes, streams, reservoirs, and other water bodies, use of pesticides, general safety and sanitation, accommodating the public, and damage or injury to any person or

property resulting from any construction activity. Section 7-1.01F specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

In addition, the contractor will be required by the resident engineer to comply with Section 10 of the Standard Specifications, which is directed at controlling dust. Under this section, water or dust palliative will be applied to the site and equipment as frequently as necessary to control fugitive dust emissions. Soil binder will be spread on any unpaved roads used for construction purposes, and all parking areas. Trucks will be washed off as they leave the right of way as necessary to control fugitive dust emissions.

Section 10 further requires the contractor to develop a dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to existing communities. The contractor is required to locate equipment and material storage sites as far away from residential and park uses as practical, and to keep construction areas clean and orderly. The resident engineer will require that the contractor use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic. The contractor will also be required by the Resident Engineer to cover all transported loads of soils and wet materials prior to transport, or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM10 and deposition of particulate during transportation.

Section 10 of the Standard Specifications also requires the contractor to remove dust and mud that are deposited on paved, public roads during construction to decrease particulate matter, and to install mulch or plant vegetation as soon as practical after grading to reduce windblown dust.

Section 10 requires the contractor to route and schedule construction traffic in order to reduce congestion and idling vehicles along local roads during peak travel times. It requires that construction equipment and vehicles shall be properly tuned and maintained, and it directs that low-sulfur fuel shall be used in all construction equipment.

There are also other sections throughout the Standard Specifications that relate in some way to air quality. For example, if dust palliative materials other than water are

to be used, material specifications are contained in Section 18 of the Standard Specifications.

Finally, all power equipment emissions including temporary batch plants will be under the jurisdiction of the United States Environmental Protection Agency, and not the State of California. This is due to the project location, which is entirely within the sovereign lands of the Yurok Tribe. The Tribe has not been assigned this responsibility by the EPA, so equipment certifications for this project must go through the EPA.

Air Quality--Conclusions

The project vicinity is not listed as either a "non-attainment" or "maintenance" location for air quality, so an analysis of potential air quality impacts related to this single project is not required.

In general, the project is not expected to have any detectable long term effect on local air quality. Temporary impacts to air quality during construction would be minimized by strict enforcement of the applicable contract specifications by the Resident Engineer during construction.

Water Quality

Regulatory Setting

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (USACE) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Department activities on its highways and facilities. Department construction projects are regulated under the Statewide permit, and projects performed by other entities on Department right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1 acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Department activities less than 1 acre require a Water Pollution Control Program.

In addition, Caltrans standard construction procedures include a number of avoidance, minimization, and/or mitigation measures.

1. For storm water quality protection, the Department has a Storm Water Management Plan (SWMP) to reduce or eliminate pollutants in runoff discharging to drainage conveyances and waterways. The SWMP is the framework for developing and implementing guidance to meet permit requirements for the Department's storm water discharges.

2. With respect to storm water quality, project mitigation is accomplished by compliance with the Departments' Statewide Permit and the SWMP. Avoidance and minimization measures for storm water are accomplished by implementation of approved Best Management Practices (BMPs), which are generally broken down into four categories: Pollution Prevention, Treatment, Construction, and Maintenance BMPs. The Department's Storm Water Program contains guidance for implementation of each of these BMPs. Certain projects may require installation and maintenance of permanent controls to treat storm water. Selection and design of permanent project BMPs is refined as the project progresses through the planning stage and into final design.

The United States Environmental Protection Agency (EPA) has the responsibility for issuing water quality certifications required under the CWA on tribal lands, unless the tribe has been granted this responsibility by the federal government.

Water Quality--Analysis

Field reviews by the project biologist established that no wetlands as defined by the United States Army Corps of Engineers would be affected by the proposed work.

The proposed work at Location #6 includes culvert repairs within "Waters of the United States" and the bed of a natural stream. This work will require a Nationwide Permit from the USACE, water quality certifications from the Yurok Tribe and EPA, and a streambed alteration agreement from the Department of Fish and Game. Water quality impacts will be minimized at this location by restricting culvert work to the period between June 15 and October 15, and requiring clean diversion of any remaining flows. The proposed work at this location would temporarily impact approximately 15 square feet of streambed during construction, and would permanently impact approximately 162 square feet of streambed through the placement of rock slope protection at the outlet.

The State's contractor will be required prior to construction to submit a SWPPP for this project, due to the total ground area to be disturbed during construction. The Resident Engineer will be responsible for ensuring the contractor's strict compliance with the SWPPP, which will consist of accepted and proven measures (BMPs).

The Resident Engineer will insure that all proposed work on culverts will be conducted in dry conditions.

The Resident Engineer will insure that the contractor has all necessary erosion control materials on site prior to starting excavation, and install BMPs in advance of excavation wherever possible.

An erosion control plan has been prepared for the project. A revegetation plan has been prepared for the project. The Resident Engineer will implement both plans at the earliest practicable date during construction.

A water quality certification will be required for the project by the U.S. EPA. At the present time, the Yurok Tribe has not been delegated this responsibility by the federal government.

Water Quality--Conclusion

If the measures detailed above are strictly implemented during construction, the proposed project should not have a negative impact upon water quality.

Wild and Scenic River

Regulatory Setting

Projects affecting Wild and Scenic Rivers are subject to the National Wild and Scenic Rivers Act (16 USC 1271) and the California Wild and Scenic Rivers Act (Pub. Res. Code sec. 5093.50 et seq.).

There are three possible types of Wild and Scenic Designations:

Wild: undeveloped, with river access by trail only;

Scenic: undeveloped, with occasional river access by road; or

Recreational: some development is allowed, with road access.

Wild & Scenic River--Potential Impacts

The proposed construction would take place on a highway that closely follows a section of the Klamath River, specifically the Lower Klamath River (the portion of the river that is below Upper Klamath Lake, near Klamath Falls, Oregon.) The Lower Klamath consists of approximately 263 miles of mountainous river channel from Upper Klamath Lake to the Pacific Ocean at Requa on the Humboldt County coast.

The Lower Klamath drains the north slope of Mount Shasta, as well as the Klamath and Siskiyou Mountain Ranges, including the Marble Mountains and Trinity Alps. The total watershed consists of approximately 16,000 square miles. The major tributaries to the Lower Klamath are the Shasta River near Yreka, the Scott River near Seiad Valley, the Salmon River at Somes Bar, and the Trinity River at Weitchpec. All of these have been given state or federal protection as Wild and Scenic rivers, an indicator of the pristine nature of the entire Lower Klamath drainage.

Within the project limits are several important tributaries to this section of the Klamath River, including Pine Creek, Tully Creek, Roach Creek, Cappell Creek, and Pecwan Creek.

Historically, the Klamath River has produced the third largest salmon runs on the West Coast, after the Sacramento River and the Columbia River, but those once-impressive salmon runs are now seriously diminished.

The average discharge at the mouth of the Klamath is 17,000 cubic feet per second, with a recorded high flow of 378,000 cubic feet per second and a recorded low flow of 1,340 cubic feet per second. For visualization purposes, this high flow mark meant that a volume equal to nearly two Goodyear blimps was flowing into the ocean each second, while the low flow mark is the equivalent volume of four Volkswagen Beetles each second.

The Lower Klamath drainage is mostly undeveloped mountain wilderness. The drainage is one of the largest and most impressive on the West Coast, capable of generating massive flows under optimal conditions. Water quality throughout the watershed is high due to the remote and rugged terrain, although upstream diversions lead to summer flows within the Klamath that are too low to maintain cool water temperatures. This results in extensive algae blooming throughout the river each summer, and led to a devastating fish kill in 2002.

Both the State and Federal governments have designated the Klamath River as "Wild and Scenic", and the portion of the Klamath River that is adjacent to the proposed project is classified as "recreational" in the National Wild and Scenic River System. In order to determine if the proposed project would have any negative impact upon this Wild and Scenic River, a number of issues require deeper review.

Wild and Scenic River--Analysis

The most severe negative impacts to designated Wild and Scenic Rivers are associated with projects that adversely affect the "free-flowing characteristics" of the river. The most obvious projects of this type would be dams, permanent diversions, or re-channelizations, but this also covers the placement of rock slope protection**.** The proposed project includes rock slope protection, but the quantity is relatively minor and none will be placed below the Ordinary High Water (OHW) mark.

Another concern would be the potential for the project to alter the river's classification as "Wild and Scenic". Examples of these types of project impacts are the development of new roads into stretches of river that were previously wilderness, or the development or elimination of substantial recreational facilities along the river.

An additional point to consider is the potential for avoiding impacts to the Wild and Scenic River altogether by selecting another feasible alternative. But in this proposed project there is no other feasible alternative due to the terrain that is the cause of the roadway deficiencies in the first place**.** To develop a whole new alignment would

result in significant impacts to nearly all resources present at the nine project locations.

Finally, the proposed project includes walls, which are by definition a visual impact to a Wild and Scenic River. In order to minimize visual impacts from walls, aesthetic treatments to the visual portions of these walls will be included in the project design to minimize the visual effect of a man-made wall within a natural setting. Examples of similar proposed treatments are depicted on pages 21 and 22 of this document. In addition, wall heights and lengths will be kept to the minimum necessary to achieve the project's purpose. The use of natural timbers for the face of the wall at Location #1 is proposed as a means of duplicating more rustic or historic structures in the area. New metal guardrail itself is often a visual impact, and measures can be taken to avoid or minimize this impact, including use of guardrail that has been treated to reduce glare.

Wild and Scenic River---Conclusions

Although RSP is proposed for Location #1, the proposed project would not impede the free-flowing characteristics of the Klamath River.

The proposed project does not have the potential to alter the Lower Klamath River's designation as "Wild and Scenic" since it proposes no new access to wilderness areas and would not affect recreational uses or facilities.

There are no feasible alternatives to construction within the Wild and Scenic River corridor.

In consideration of all of the above, the proposed project is expected to have only negligible effects on the Wild and Scenic Klamath River, as long as the minimization measures that have been proposed in discussions with the Yurok Tribe are completed during construction.

The agency with jurisdiction over Wild and Scenic Rivers within the project limits is the Yurok Tribe. Caltrans has consulted with the Yurok Tribe on this issue, and participated in a field review to discuss this aspect of the project with Yurok Tribal staff on March 18, 2009. The Yurok Tribe has given conditional concurrence, in a letter dated May 24, 2010, with Caltrans' determination that the project should only cause minimal Wild and Scenic River impacts. The Tribe has requested further discussion on the subject of metal guardrail. These ongoing discussions are

considered to be refinements to the proposed project with no potential to result in significant visual impacts.

Cumulative Impacts

Regulatory Backgroud

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines.

Potential Cumulative Impacts

A number of other projects along this section of Highway 169 are in various stages of development. There are Caltrans projects currently under construction to replace four highway bridges and repair a slipout resulting from storm damage, as well as a Yurok Tribe/PG&E project to extend public utilities to more residents. In addition, Caltrans has approved the replacement of two existing walls that have been damaged by storms, and other storm damage at seven locations; these projects are expected to be completed in the summer of 2010. The County of Humboldt has conducted repairs to the Martins Ferry Bridge each of the past three years, but the project is now complete.

Cumulative Impacts—Conclusion

There is potential for cumulative impacts to the local community from the activities listed above, but these can be avoided by scheduling construction activities in such a way that the community's needs are accommodated along with the contractor's needs. If these preconstruction discussions fail to accommodate the needs of the community on a road without alternative detours, then the project could result in significant community impacts that are outside the scope of this study.

The potential for significant cumulative biological or cultural impacts from these projects is considered to be very slight, given the various types of resources affected and the relatively low level of impacts from each project.

Tree removal and visual impacts from these projects contribute to cumulative impacts as well, but neither impact is considered to be substantial.

Climate Change/Global Warming

Regulatory Background

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with greenhouse gas (GHG) emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck GHG emissions (on May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012; this is the same standard that was proposed by AB 1493).

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by 2020 and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing a Climate Action Program. This document can be found at: http://www.dot.ca.gov/docs/ClimateReport.pdf .

Under the program, the approach is twofold: 1) reducing congestion and improving efficiency of transportation systems through smart land use, operational improvements, and Intelligent Transportation Systems; and 2) institutionalizing energy efficiency and GHG emission reduction measures and technology into planning, project development, operations, and maintenance of transportation facilities, fleets, buildings, and equipment.

Climate Change/Global Warming---Analysis

Any potential climate change impact from the proposed project is expected to be minimal and immeasurable.

The proposed project will have temporary impacts related to the use of carbon fuels by construction equipment, as well as temporary air quality impacts and vegetation removal impacts that theoretically increase warming on a global level.

The proposed project would help meet the goals of the Department's Climate Action Plan by improving the efficiency of the existing facility through operational improvements. The improvements proposed on this particular project are expected to have a minimal and immeasurable positive effect on climate, but implementation of the Climate Action Plan on a statewide level should result in positive cumulative effects.

Climate Change/Global Warming---Conclusion

The proposed project is not expected to have a discernible effect on climate change or global warming.

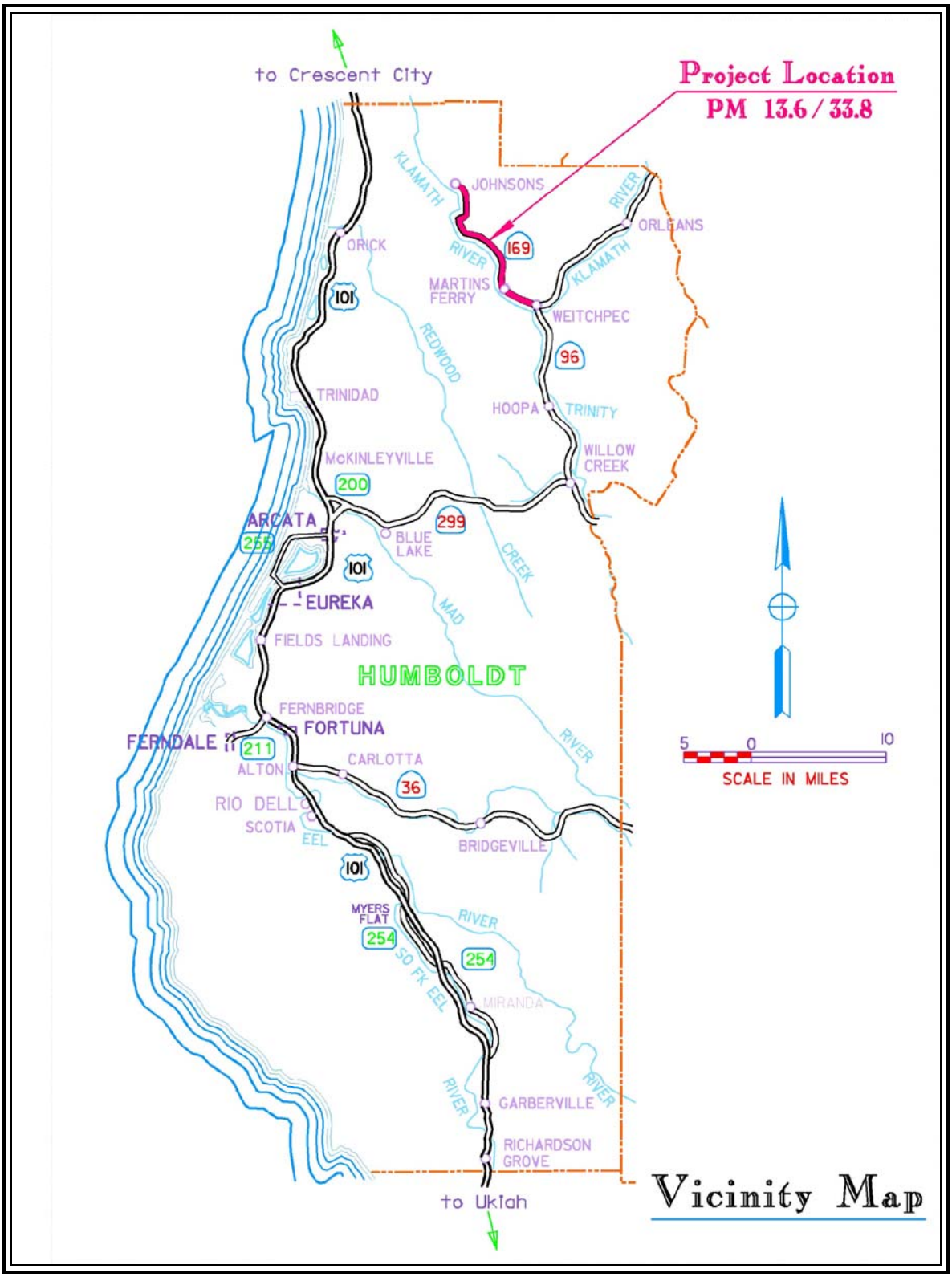


Figure 1. Project Vicinity Map

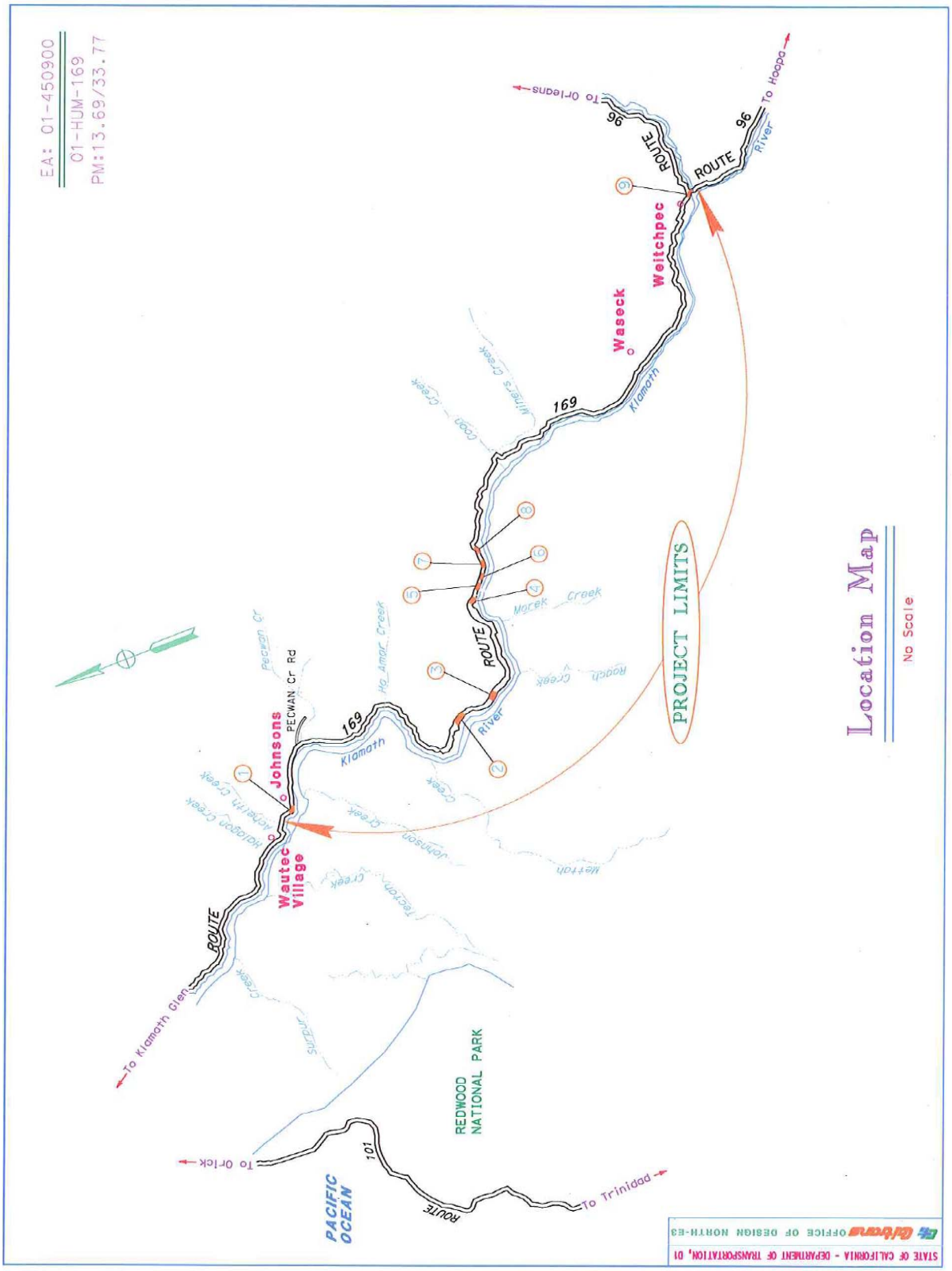


Figure 2. Project Location Map

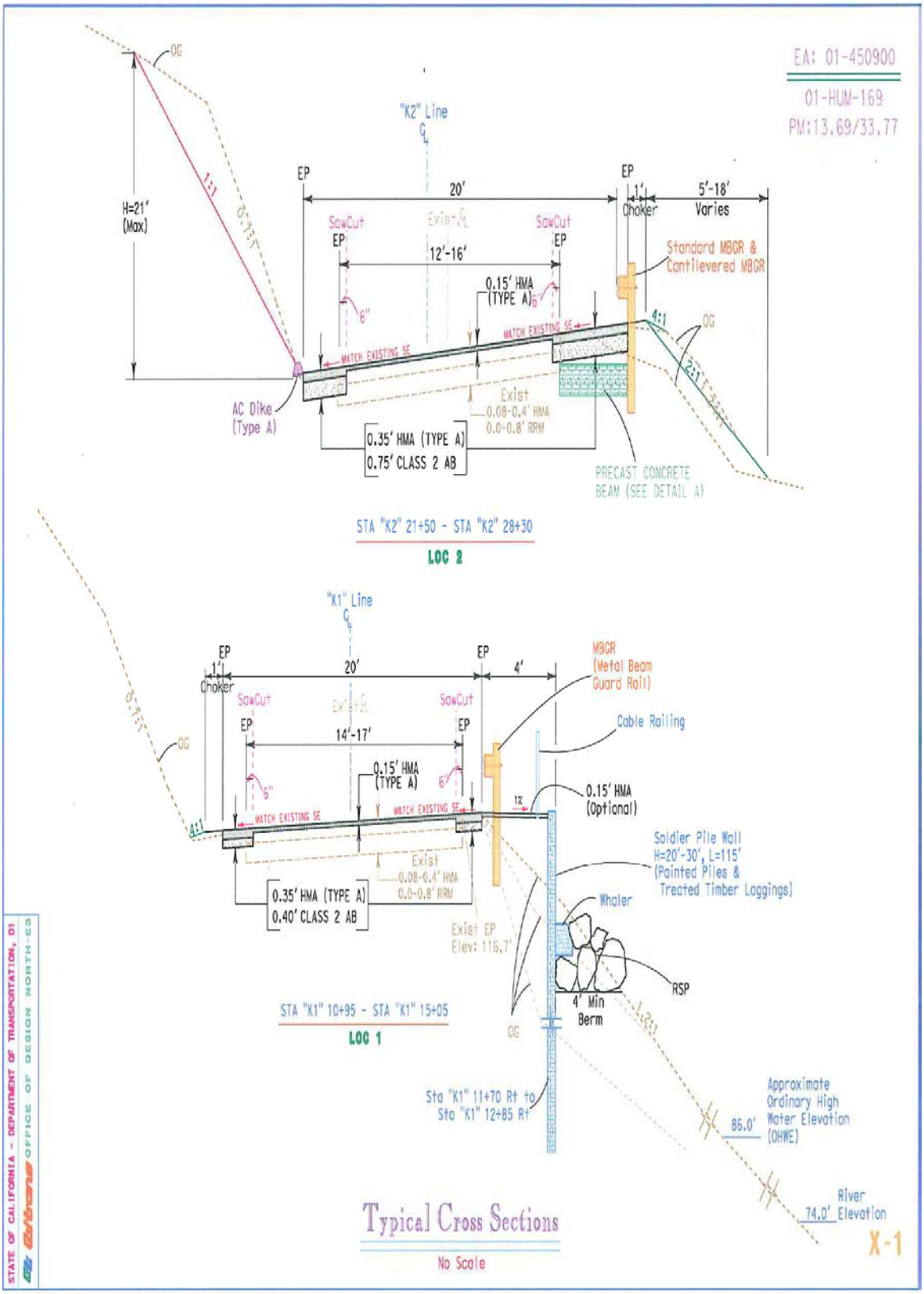


Figure 3. Typical Cross Section, Locations 1 & 2

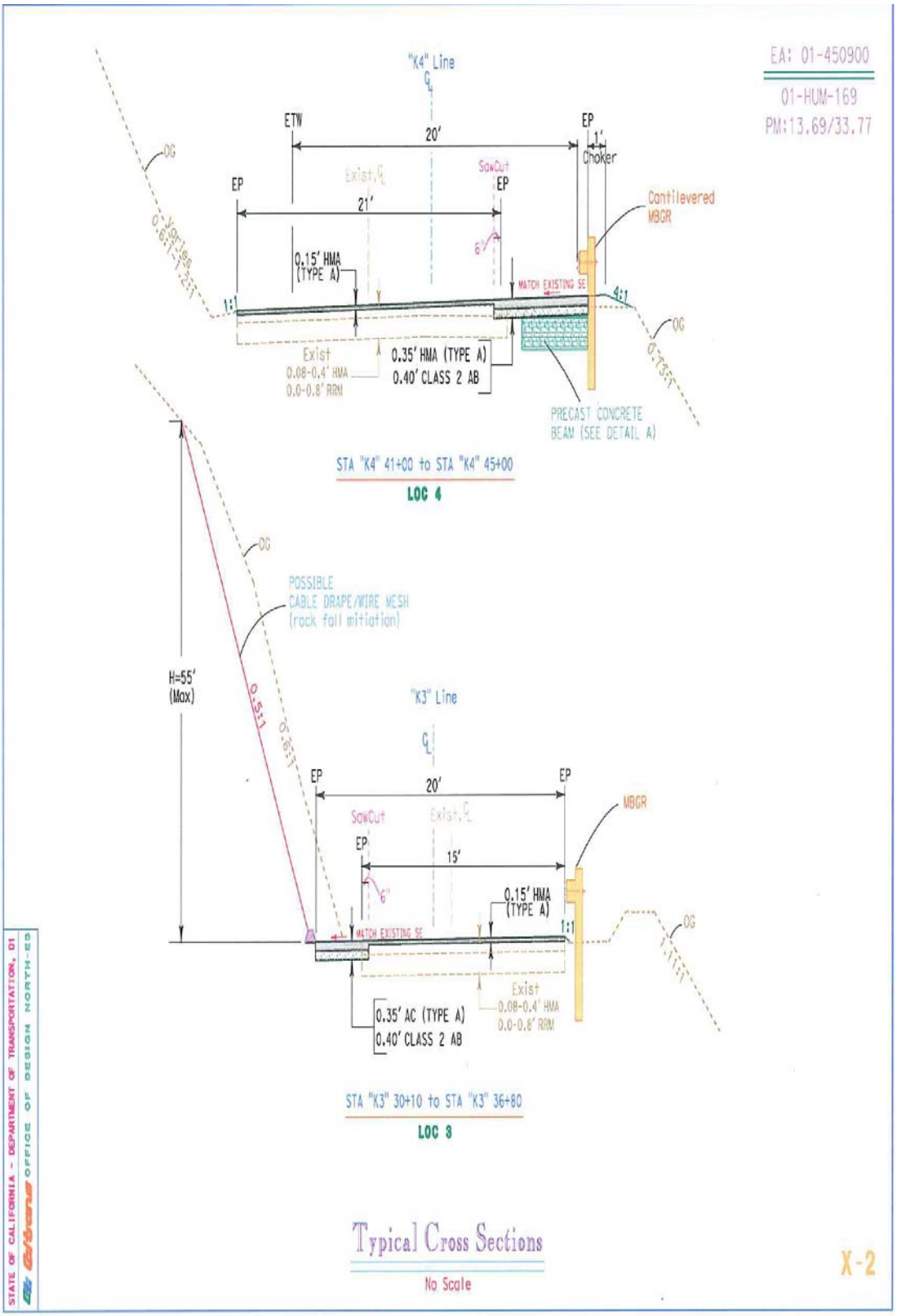


Figure 4. Typical Cross Section, Locations 3 & 4

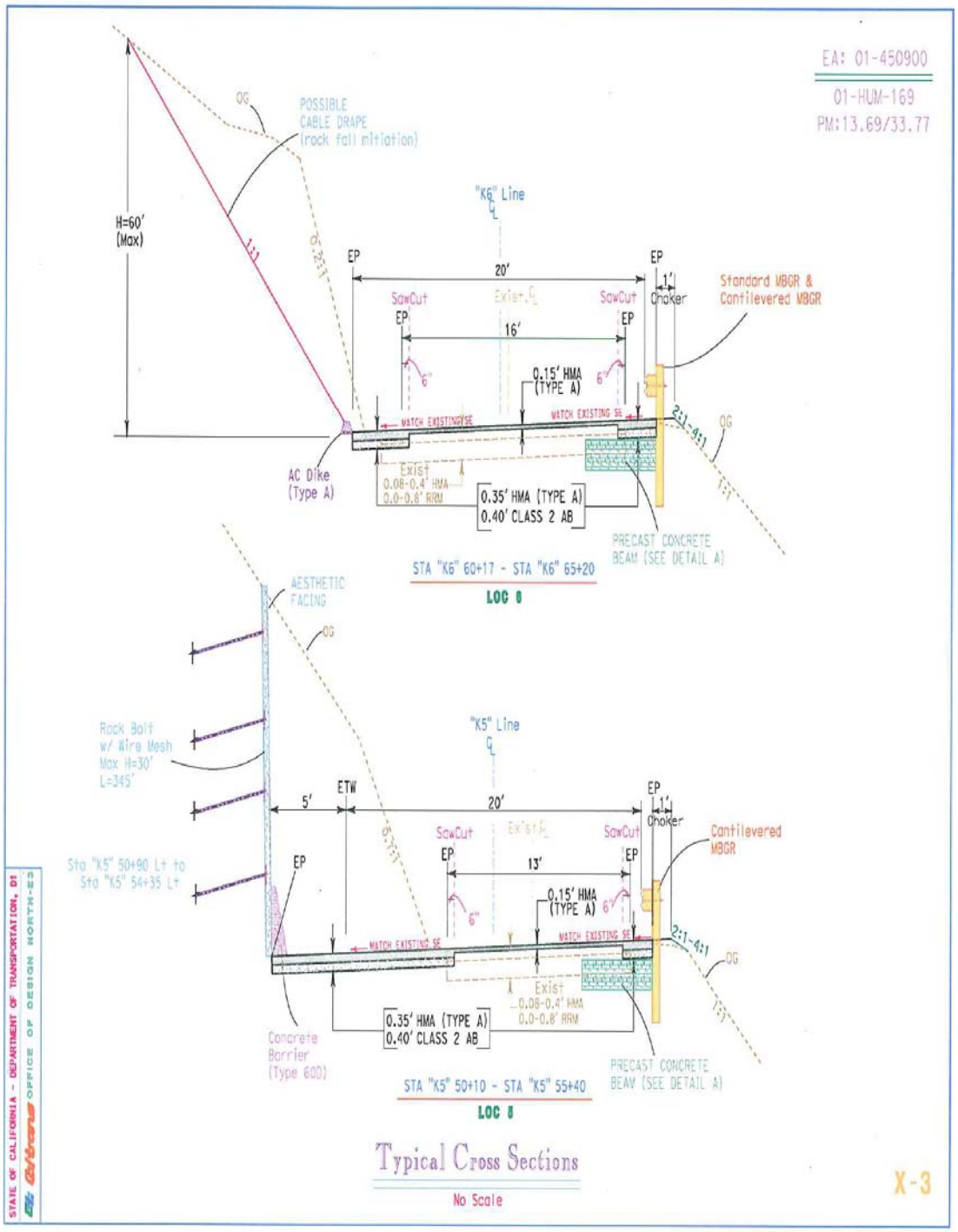


Figure 5. Typical Cross Section, Locations 5 & 6

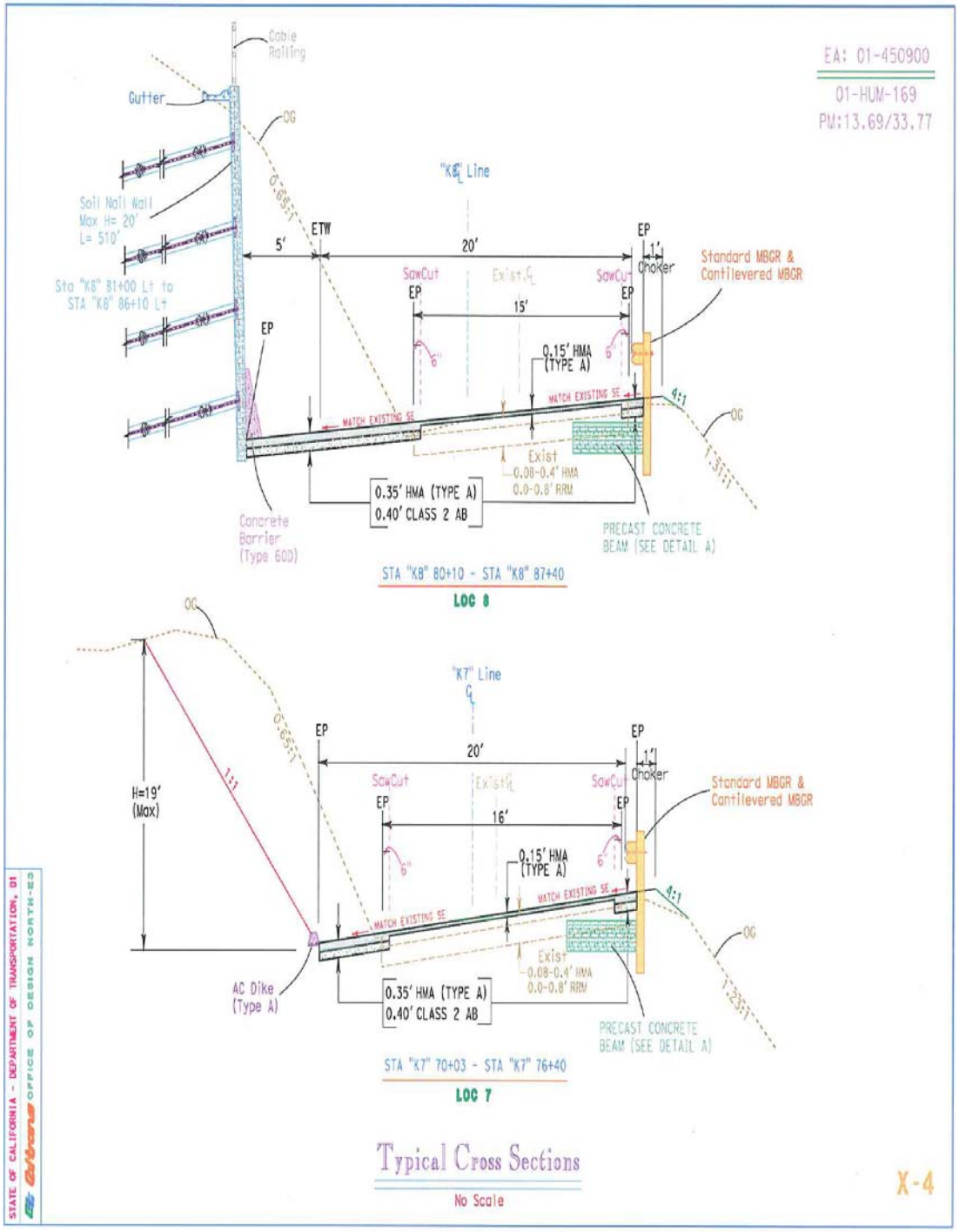


Figure 6. Typical Cross Section, Locations 7 & 8

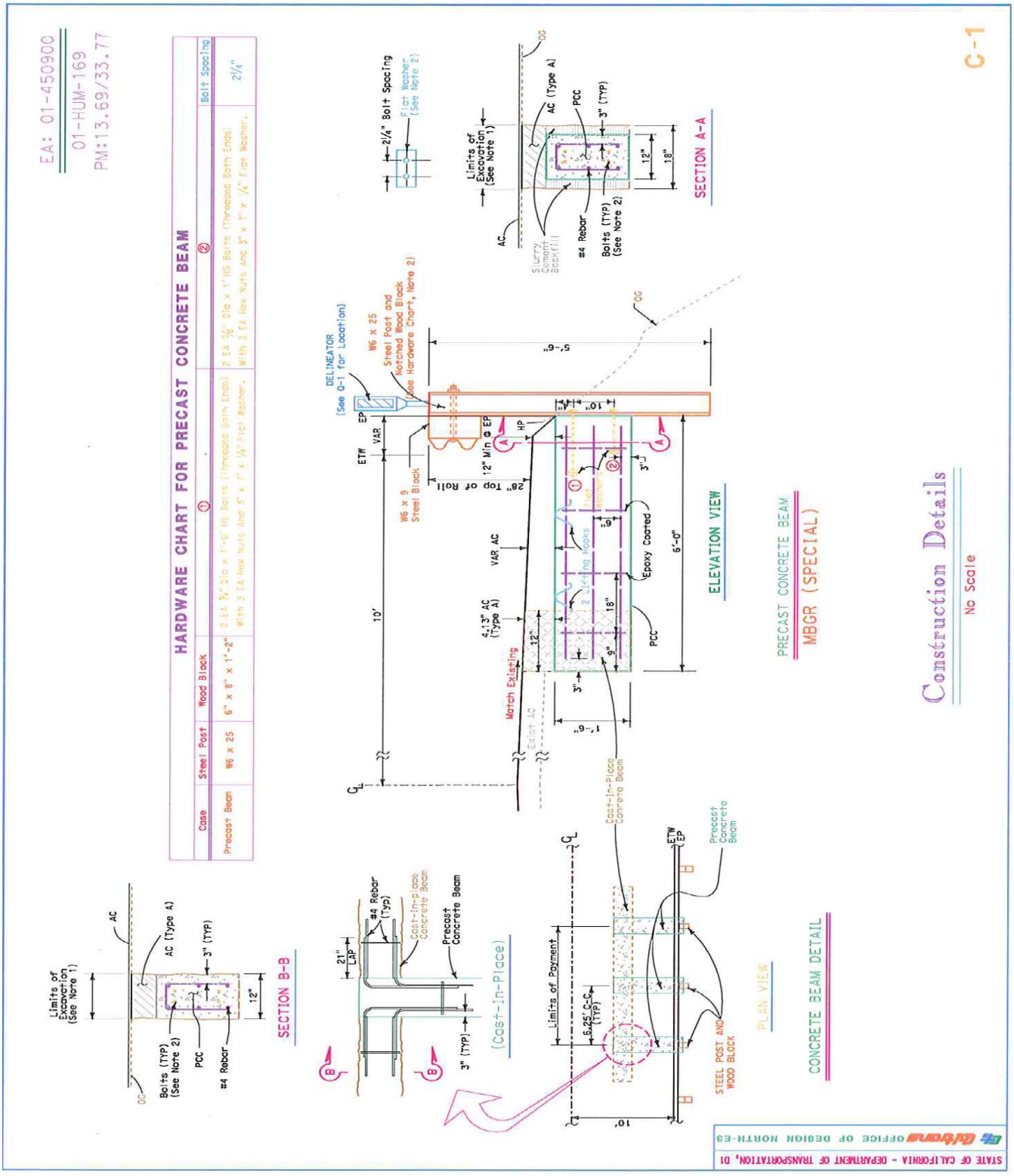


Figure 7. Construction Details

California Environmental Quality Act Checklist

The following pages contain a checklist that identifies physical, biological, social, and economic factors that could potentially be affected by the proposed project. The levels for determining environmental impacts under the California Environmental Quality Act include "potentially significant impact," "less than significant impact with mitigation," "less than significant impact," and "no impact."

This checklist is to be used in conjunction with the detailed text sections contained within this report.

I. AESTHETICS — Would the project:

a) Have a substantial adverse effect on a scenic vista?	☐	X	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	X	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	X	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	X	☐

II. AGRICULTURE RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	X

III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	X
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	X

e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	X
IV. BIOLOGICAL RESOURCES — Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	X	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	X	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	X	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	X	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	X	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	X
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	X
VI. GEOLOGY AND SOILS — Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	X

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	X
ii) Strong seismic ground shaking?	☐	☐	☐	X
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	X
iv) Landslides?	☐	☐	X	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	X	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	X	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	☐	☐	☐	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	X
VII. HAZARDS AND HAZARDOUS MATERIALS — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people	☐	☐	☐	X

residing or working in the project area?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	X	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X

VIII. HYDROLOGY AND WATER QUALITY — Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	X	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite?	☐	☐	X	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite?	☐	☐	☐	X
e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	X
f) Otherwise substantially degrade water quality?	☐	☐	☐	X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	X
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X
j) Result in inundation by a seiche, tsunami, or mudflow?	☐	☐	☐	X

IX. LAND USE AND PLANNING — Would the project:

a) Physically divide an established community?	☐	☐	☐	X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	X

X. MINERAL RESOURCES — Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	X

XI. NOISE — Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	X	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	X	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	X	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X

XII. POPULATION AND HOUSING —
Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X

XIII. PUBLIC SERVICES —

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?	☐	☐	☐	X
Police protection?	☐	☐	☐	X
Schools?	☐	☐	☐	X
Parks?	☐	☐	☐	X
Other public facilities?	☐	☐	☐	X

XIV. RECREATION —

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	X

XV. TRANSPORTATION/TRAFFIC — Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	X
e) Result in inadequate emergency access?	☐	☐	X	☐
f) Result in inadequate parking capacity?	☐	☐	☐	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	X

XVI. UTILITY AND SERVICE SYSTEMS — Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	X	☐
e) Result in a determination by the wastewater				

treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	X	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X

XVII. MANDATORY FINDINGS OF SIGNIFICANCE —

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	X
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	X
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	X

Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, consultations with the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration National Marine Fisheries Service, and the California Department of Fish and Game. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

May 2005. The proposed scope of the project was presented at a public meeting held by the Yurok Tribe at the Weitchpec Community Center.

January 2006. Initial contact by Project Archaeologist with Dr. Thomas Gates, Tribal Heritage Preservation Officer, regarding project planning process.

March 2007. Additional contact by Project Archaeologist with Dr. Thomas Gates, Tribal Heritage Preservation Officer, regarding project planning process.

July 2007. Additional contact by Project Archaeologist with Dr. Thomas Gates, Tribal Heritage Preservation Officer, regarding project planning process.

May 28, 2008. Email exchange between Project Biologist and USFWS regarding proposed design, jurisdiction, and need for consultation.

February 11, 2009. Email exchange between Project Biologist and NOAA Fisheries regarding proposed design, jurisdiction, and need for consultation.

February 23, 2009. Email exchange between Project Biologist and Regional Water Quality Control Board regarding proposed design, jurisdiction, and need for consultation.

March 3, 2009. Email exchange between Project Biologist and CDFG regarding jurisdiction and need for permits on the proposed project.

March 9, 2009. Email exchange between Project Biologist and representative of Regional Water Quality Control Board regarding jurisdictional determination.

March 18, 2009. Field review with Yurok Tribal Environmental staff for Wild and Scenic River compliance. Project Manager, Project Designer, Environmental Coordinator, Project Biologist and Project Archaeologist are in attendance.

March 2009. Additional contact with Mr. Robert McConnell, Tribal Heritage Preservation Officer, by Project Archaeologist, regarding project planning process and proposed design.

June 2009. Additional contact with Mr. Robert McConnell, Tribal Heritage Preservation Officer, by Project Archaeologist regarding project planning process and proposed design.

August 20, 2009. Meeting between Project Biologist and representatives of NOAA Fisheries and USFWS regarding proposed design, jurisdiction, and need for consultation.

List of Preparers

The following Caltrans North Region staff contributed to the preparation of this Initial Study:

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